



FAQ's R32

▪ Why is R32 Required?

The Main Pillars of the new EU F-Gas Rules are to reduce emissions and to move towards lower GWP solutions. This involves a phase down in the consumption of HFCs and a reduction of 37% by 2020 and 79% by 2030. By 2025 Single Split A/C systems with less than 3kg refrigerant charge should contain a refrigerant with a GWP <750. R410A does not meet this requirement having a GWP of 2088. R32 has a GWP of 675 and meets legislation criteria. Other options are Ammonia (R717) which is toxic and CO2 (R744) which has a lower efficiency.

▪ How efficient is R32?

R32 has similar working pressure to R410A around 12-26 Bar (174-377 Psi), however R32 has better capability to exchange heat-load than R410A and delivers higher capacity than R410A making the systems more efficient.

▪ How much R32 is used?

R32 has a lower GWP than R410 and uses 30% less refrigerant charge to produce an equal load capacity. As a result the total CO2 emission can be reduced around 77%.

▪ What are the risks with R32?

Generally the lower the GWP the higher the level of flammability, R32 is no different. R32 has been given the Classification A2L and is classified Flammable category A2. Classification to Directive 67/548/EEC & 1999/45/EC: F+; R12 Extremely flammable. Accordingly only experienced and properly instructed persons should handle gases under pressure.

▪ Is R32 a popular refrigerant?

TOSHIBA have been producing R32 units for use in the Japanese market since 2014 for both Residential and Light Commercial; Residential 220,000* units installed without any incidents; Light Commercial 5000* units installed without any incidents. Across all manufacturers there are over 5* million R32 units installed in Japan alone, with other countries such as India and China also using R32 split residential systems (*approximate).

▪ Does my current F-gas certificate allow me to handle R32?

Due to the flammability classification of this refrigerant (A2L) UK installers must undertake the 1 Day City & Guilds: 6187-21 Hydrocarbon Safe Handling Course, in addition to their F-Gas 2079 Certificate.

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- **Can I use the same installation equipment for R32?**

Installers can continue to use many of the same installation tools as used for R410A including pipe benders, manifold gauges, charging hoses etc. The important exceptions to this are Reclaim Unit and the Vac Pump, both of these items must be of the “brushless” type and specifically suitable for use with R32. Reclaim cylinders must also be classified for use with R32.

- **Can I use flare connections inside for R32?**

Importantly the refrigerant connections to the indoor unit must be brazed and flare connections are not allowed.

- **Where can R32 systems be installed?**

R32 systems can only be installed for Residential applications in Europe. Installation of R32 systems in commercial premises including retail outlets, offices and public spaces is prohibited due to the A2L classification status. This position is subject to EC Commission regulations and may change in the future to enable R32 to be installed in to commercial premises.

- **Have Toshiba upgraded specifications for R32 units?**

In accordance with Toshiba’s policy of ensuring harmonious and safe working environments our R32 units include as standard “brushless” type motors, enclosed relays and fireproof metal enclosures.

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